

It appears from the Rev. Mr Gordon's Observations made at Kinfauns, (see this *Journal*, vol. ii. p. 371.) that the mean temperature of the year, as taken at 10<sup>h</sup> A. M. is 1°.8 greater than the mean temperature taken at 10<sup>h</sup> A. M. and 10<sup>h</sup> P. M. Hence we have for the mean temperature of Carbeth,

	47°.5
	1.8
	45.7
Add for 480 feet of Elevation,	1.4
Mean Temperature at the level of the sea,	47.1
Mean Temperature of Carbeth, according to Dr Brewster's formula, (Lat. 55° 59' 50"),	45.6
Difference,	1.5

11. *Quantity of Rain that fell at Carbeth in the years 1815 to 1820.*—The rain-gauge was fixed on the top of the house.

Month.	1815.	1816.	1817.	1818.	1819.	1820.	MEAN.
January,	0.750	3.869	4.696	6.854	4.722	3.970	4.143
February,	4.855	3.259	4.562	5.025	4.195	1.696	3.932
March,	5.563	2.807	4.610	2.923	2.841	2.625	3.561
April,	1.430	1.673	.322	.680	3.665	2.093	1.644
May,	3.684	3.442	3.371	1.390	3.450	6.435	3.629
June,	1.831	2.750	4.405	3.364	3.666	1.885	2.950
July,	1.711	4.623	3.246	4.802	3.025	2.310	3.286
August,	3.638	1.609	6.185	1.266	2.405	6.173	3.546
September,	5.552	6.095	2.163	2.914	3.510	4.212	4.074
October,	5.308	2.672	1.350	4.375	4.074	2.630	3.401
November,	3.869	2.850	4.470	5.034	3.412	2.966	3.768
December,	3.202	3.940	5.585	2.760	3.880	3.626	3.832
Fallen in each Year,	41.393	38.589	44.965	41.387	42.845	40.621	41.766

12. *Gelatinous Meteor at Amherst in Massachusetts.*—On the 13th August 1819, between eight and nine o'clock in the evening, a fire-ball, of the size of a large blown bladder, and of a brilliant white light, was seen in the atmosphere. It fell near a house, and was examined by Rufus Graves, Esq. formerly Lecturer in Chemistry at Dartmouth College. It was of a circular form, resembling a solid dish, bottom upwards, about 8 inches in diameter, and about 1 in thickness, of a bright buff colour, with a fine nap upon it, similar to that in milled cloth. On removing this nap, a buff-coloured pulpy substance, of the consistence of soft soap, appeared, having an offensive suffocating smell, producing nausea and giddiness. After a few minutes exposure to the air, the buff colour was changed into a livid colour, resembling venous blood. It attracted moisture readily from the air. A quantity of it in a tumbler soon liquefied, and

formed a mucilaginous substance, of the consistence, colour, and feeling of starch when prepared for domestic use. The tumbler was then set in a safe place, where it remained undisturbed for two or three days, and it was found to have all evaporated, except a small dark-coloured residuum adhering to the bottom and sides of the glass, which, when rubbed between the fingers, produced about a thimbleful of a fine ash-coloured powder, without taste or smell. With concentrated and diluted muriatic and nitric acids, no chemical action was observed, and the matter remained unchanged. With the concentrated sulphuric acid, a violent effervescence ensued, a gas was evolved, and the whole substance nearly dissolved.—*American Journal of Science*, vol. ii. p. 335.

13. *Singular Appearance of Snow and Hail.*—In January 1809, the Rev. D. A. Clark observed, in Morris County, New Jersey, a regular formation of cylinders of snow. When a deep snow was upon the ground, a shower of rain fell, and, in consequence of a sudden cold, the rain was congealed on the surface of the snow, and formed upon it a cake of ice. Another shower of snow fell to the depth of three-fourths of an inch, and the sky having suddenly cleared, the cold became very intense, and the wind blew a gale. “Nature,” says Mr Clark, “now began her sport. Particles of the snow would move upon the icy crust from 12 to 20 inches, and would then begin to roll, making a track upon the ice shaped like an isosceles triangle. The balls enlarged according to circumstances, and, aided by the declivity of the ground, the rolls were of the size of a barrel, and some even larger. Thus the whole creation, as far as the eye could see, was covered with snow-balls, differing in size from that of a lady’s muff to the diameter of  $2\frac{1}{2}$  or 3 feet, hollow at each end to almost the very centre, and all as true as so many logs of wood shaped in a lathe.”

About two years before, Mr Clark observed in the heat of summer hailstones about one-fourth or three-eighths of an inch thick, and of sufficient size to hide a shilling. Almost every one of them was perforated in the middle, as if they had been held between the fingers, till the fingers by their warmth had melted away the middle, and had met. When the perforation was not complete, there was in every case an inclination to perforation.